



Base Year Employment Estimation: Methods and Sources Discussion

October 28, 2020



Base Year Employment Estimation

- **Why is it important to have a common methodology for base year employment estimation?**
- **What is the current method?**
 - What are the primary components?
 - What are the sources?
- **How / when was it decided upon?**

Base Year Employment Estimation

- **Data Sources**

- **Wage and Salary Employment**

- Bureau of Labor Statistics
 - Quarterly Census of Employment and Wages
 - Current Employment Statistics
 - Bureau of Economic Analysis
 - Others

- **Self-Employment**

- Census Bureau
 - Nonemployer Statistics
 - American Community Survey
 - Bureau of Economic Analysis
 - Proprietor Data
 - Bureau of Labor Statistics
 - Others

Base Year Employment Estimation

- **Considerations**
 - Timing
 - Round 10 Draft Schedule
 - Release Dates
 - Estimation Methods
 - A few examples
 - Use considerations

Base Year Employment Estimation: Wage and Salary

Base Year Wage and Salary Employment Calculations, 2015 (MWCoG Method)

Jurisdiction	QCEW¹	CES Adjust²	Civ Wage & Salary Emp	Military³	Total Wage & Salary Emp
Anne Arundel	260,398	1.057	275,188	11,315	286,503
Baltimore City	334,065	1.057	353,040		353,040
Baltimore County	370,670	1.057	391,724		391,724
Carroll	56,814	1.057	60,041		60,041
Harford	89,974	1.057	95,084	1,051	96,135
Howard	165,194	1.057	174,577		174,577
Queen Anne's	14,426	1.057	15,245		15,245
Region	1,291,541	1.057	1,364,900	12,366	1,377,266

¹ Data is annual, year 2015.

² Current Employment Statistics adjustment factor for region is applied to all jurisdictions.

³ Military figures are for "Active Duty Total" from the Department of Defense Base Structure Report - FY 2015.

Source: BLS (QCEW and CES); Department of Defense Base Structure Report; MWCoG.

Base Year Employment Estimation: Wage and Salary

Base Year Wage and Salary Employment Calculations, 2015 BEA/QCEW Ratio Method

Jurisdiction	QCEW¹	BEA / QCEW Ratio (2014)²	Estimated 2015 Wage & Salary Emp
Anne Arundel	260,398	1.238	322,391
Baltimore City	334,065	1.057	353,211
Baltimore County	370,670	1.070	396,526
Carroll	56,814	1.071	60,844
Harford	89,974	1.085	97,605
Howard	165,194	1.079	178,244
Queen Anne's	14,426	1.068	15,402
Region	1,291,541	1.103	1,424,025

¹ Data is annual, year 2015.

² Derived via calculation:

BEA Wage and Salary Emp (Annual 2014) / QCEW Emp (Annual 2014)

Source: BEA; BLS; BMC.

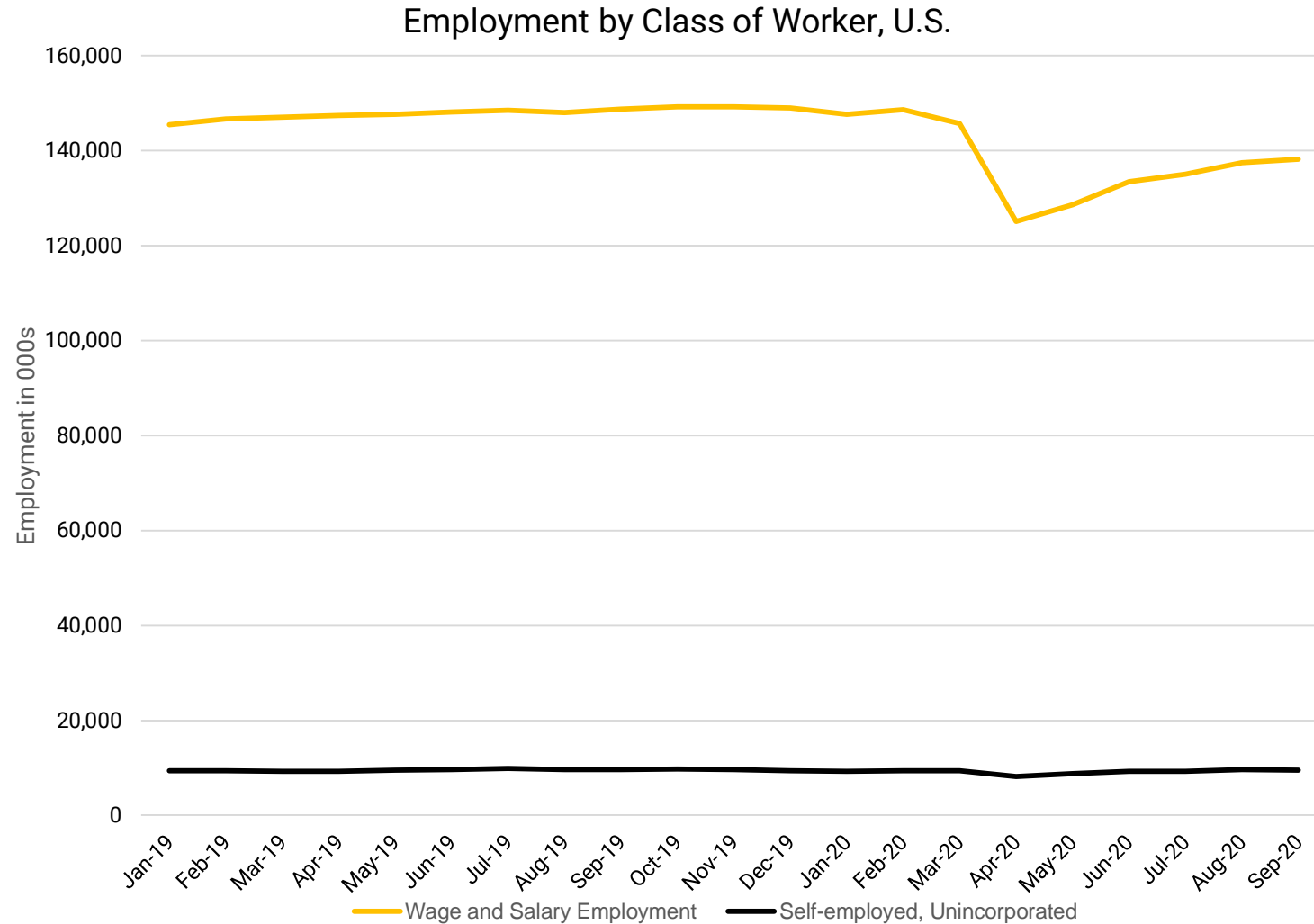
Base Year Employment Estimation: Self-Employment

Comparison of Base Year Employment Estimation Methods, Self-Employment (2015)

Jurisdiction	CFG	MWCoG
Anne Arundel	42,188	11,812
Baltimore City	45,728	13,439
Baltimore County	67,129	21,998
Carroll	13,466	4,036
Harford	16,921	4,366
Howard	26,611	7,730
Queen Anne's	5,413	1,808
Region	217,455	65,188

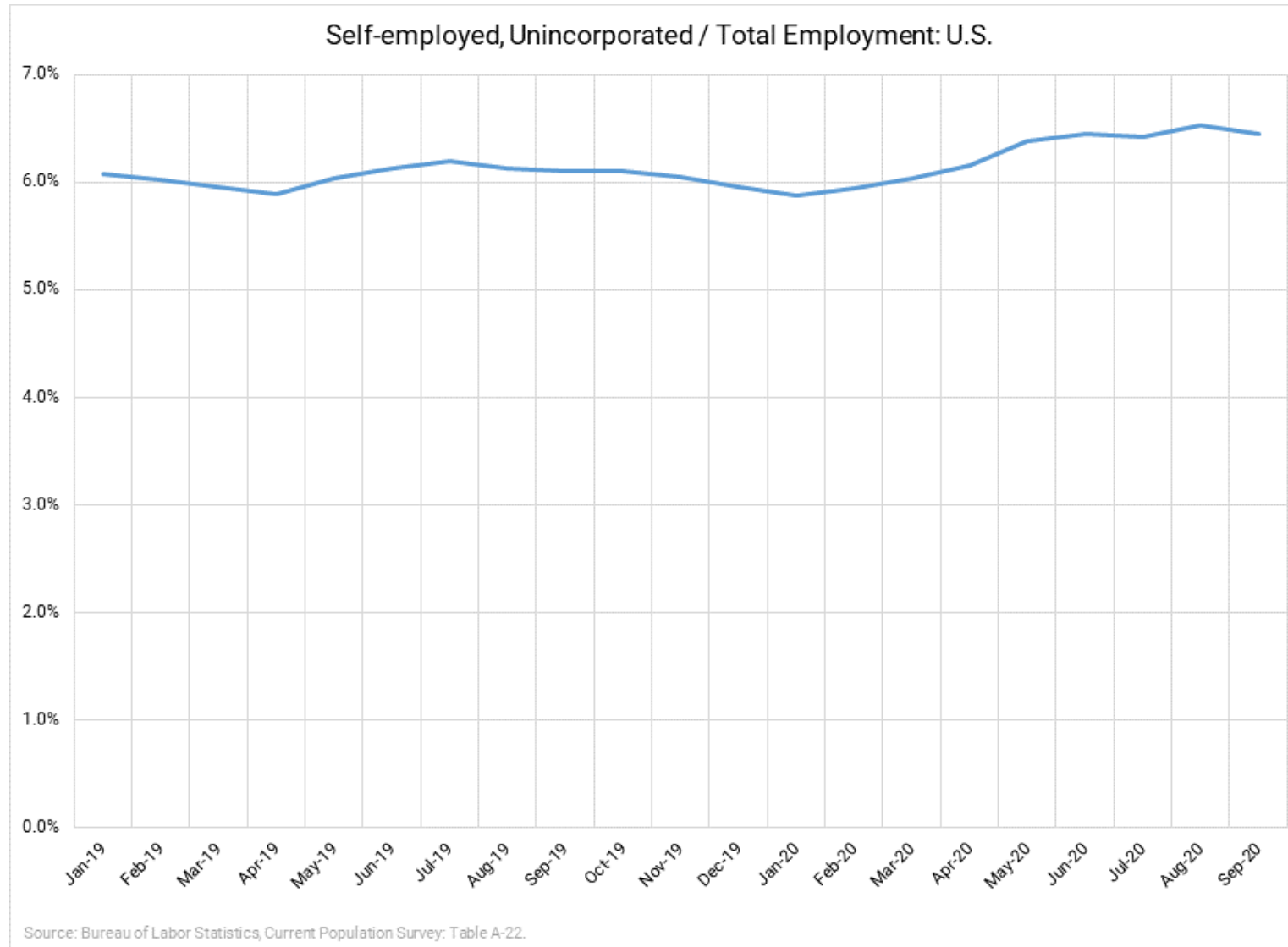
Source: BLS (QCEW and CES); Census Bureau (ACS and Nonemployer Statistics).

Base Year Employment Estimation: Self-Employment



Source: Bureau of Labor Statistics, Current Population Survey: Table A-22.

Base Year Employment Estimation: Self-Employment



Comparison of Selected Methods/Sources: Wage and Salary Employment (2015)

Jurisdiction	CFG	MWCoG	Hybrid A	Emsi
Anne Arundel	322,866	286,503	322,391	311,709
Baltimore City	353,728	353,040	353,211	359,021
Baltimore County	397,212	391,724	396,526	384,394
Carroll	60,857	60,041	60,844	59,133
Harford	97,650	96,135	97,605	94,481
Howard	177,442	174,577	178,244	170,731
Queen Anne's	15,335	15,245	15,402	14,900
Region	1,425,090	1,377,266	1,424,223	1,394,369

Note: Hybrid A W&S derived via calculation:

$(\text{BEA W\&S Emp (Annual 2014)} / \text{QCEW Emp (Annual 2014)}) * \text{QCEW (Annual 2015)}$

Source: BEA; BLS (QCEW and CES); Emsi 2020.4.

Comparison of Selected Methods/Sources: Wage and Salary Employment (Alternate Method / CFG)

Jurisdiction	CFG	MWCoG	Hybrid A	Emsi
Anne Arundel	100%	89%	100%	97%
Baltimore City	100%	100%	100%	101%
Baltimore County	100%	99%	100%	97%
Carroll	100%	99%	100%	97%
Harford	100%	98%	100%	97%
Howard	100%	98%	100%	96%
Queen Anne's	100%	99%	100%	97%
Region	100%	97%	100%	98%

Comparison of Selected Methods/Sources: Self-Employment (2015)

Jurisdiction	CFG	MWCoG	Hybrid A	Emsi
Anne Arundel	42,188	11,812	11,812	13,847
Baltimore City	45,728	13,439	13,439	14,051
Baltimore County	67,129	21,998	21,998	21,796
Carroll	13,466	4,036	4,036	4,473
Harford	16,921	4,366	4,366	5,582
Howard	26,611	7,730	7,730	8,864
Queen Anne's	5,413	1,808	1,808	1,913
Region	217,455	65,188	65,188	70,526

Note: Hybrid A = W&S (BEA/QCEW Derived) + Self-Emp (ACS Derived)

Source: BEA; BLS (QCEW and CES); Census Bureau (ACS and Nonemployer Statistics);

Emsi 2020.4.

Comparison of Selected Methods/Sources: Self-Employment (Alternate Method / CFG)

Jurisdiction	CFG	MWCoG	Hybrid A	Emsi
Anne Arundel	100%	28%	28%	33%
Baltimore City	100%	29%	29%	31%
Baltimore County	100%	33%	33%	32%
Carroll	100%	30%	30%	33%
Harford	100%	26%	26%	33%
Howard	100%	29%	29%	33%
Queen Anne's	100%	33%	33%	35%
Region	100%	30%	30%	32%

Comparison of Selected Methods/Sources: Total Employment (2015)

Jurisdiction	CFG	MWCoG	Hybrid A	Emsi
Anne Arundel	365,054	298,316	334,204	325,556
Baltimore City	399,456	366,478	366,649	373,072
Baltimore County	464,341	413,721	418,523	406,190
Carroll	74,323	64,077	64,879	63,606
Harford	114,571	100,502	101,971	100,063
Howard	204,053	182,307	185,974	179,595
Queen Anne's	20,748	17,053	17,210	16,813
Region	1,642,545	1,442,454	1,489,411	1,464,895

Note: Hybrid A = W&S (BEA/QCEW Derived) + Self-Emp (ACS Derived)

Source: BEA; BLS (QCEW and CES); Census Bureau (ACS and Nonemployer Statistics);

Emsi 2020.4.

Comparison of Selected Methods/Sources: Total Employment (Alternate Method / CFG)

Jurisdiction	CFG	MWCoG	Hybrid A	Emsi
Anne Arundel	100%	82%	92%	89%
Baltimore City	100%	92%	92%	93%
Baltimore County	100%	89%	90%	87%
Carroll	100%	86%	87%	86%
Harford	100%	88%	89%	87%
Howard	100%	89%	91%	88%
Queen Anne's	100%	82%	83%	81%
Region	100%	88%	91%	89%

For More Information

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